MODEL QUESTION PAPER

U.G. (Semester-I) Examination, 20___

(Session: 2023-27)

(Zoology)

(Paper: MJC-1)

(Diversity of Non-Chordata; THEORY)

(MGUG(I)-ZOOL-(MJC-1-T))

Time: 3 Hours   Maximum Marks: 70

Note: Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks. Answer from all the Groups as directed. Question no 1 is compulsory.

Group-A

(Objective Answer Type Questions)

1. Choose the correct answer from the options given below: 2 x 10 = 20

i)	Which of the following is not a characteristic of non-chordates?
	a) Presence of a notochord
	b) Absence of a backbone
	c) Exoskeleton in some species
	d) Diverse body plans
ii)	What is the primary body cavity in non-chordates called?
	a) Coelom
	b) Notochord
	c) Pharyngeal gill slits
	d) Endoderm
iii)	Which of the following phyla includes animals with jointed appendages and an exoskeleton?
	a) Annelida
	b) Porifera
	c) Arthropoda
	d) Cnidaria
iv)	What is the main distinguishing feature of the phylum Mollusca?
	a) Presence of segmented bodies
	b) Radial symmetry
	c) Mantle and shell
	d) Nematocysts for defence

	v)	Which of the following is a characteristic of the phylum Echinodermata?
		a) Segmented body
		b) Soft body with a coelom
		c) Water vascular system
		d) External skeleton made of chitin
	vi)	The phylum Platyhelminthes includes which type of animals?
		a) Flatworms
		b) Roundworms
		c) Segmented worms
		d) Jellyfish
	vii)	Which phylum consists of animals with stinging cells called cnidocytes?
		a) Annelida
		b) Cnidaria
		c) Arthropoda
		d) Platyhelminthes
	viii)	What is the primary respiratory organ in many arachnids (e.g., spiders)?
		a) Gills
		b) Lungs
		c) Tracheae
		d) Spiracles
	ix)	Which of the following phyla includes animals that have a porous body structure?
		a) Mollusca
		b) Porifera
		c) Nematoda
		d) Chordata
	x)	Which non-chordate phylum is known for its segmented bodies and jointed appendages?
		a) Annelida
		b) Cnidaria
		c) Echinodermata
		d) Porifera

Group-B

(Short Answer Type Questions)

Note: Write short notes on **any four** of the following: 5x4=20

2. How do animals in the phylum Porifera obtain their food?

3. Explain the importance of the water vascular system in echinoderms.

4. Name one unique adaptation of flatworms (phylum Platyhelminthes) that allows them to acquire nutrients.

5. What is the main function of the exoskeleton in arthropods, and how does it grow as the animal matures?

6. How do arachnids (e.g., spiders) respire, and what is the name of their respiratory structures?

7. Briefly describe the general body plan of animals in the phylum Annelida.

Group-C

(Long Answer Type Questions)

Note: Answer **any three** of the following: 10x3=30

8. Describe the diverse adaptations and ecological roles of arthropods in the animal kingdom.

9. Explain the structure and life cycle of *Leishmania donovani*.

10. Explain the significance of the coelom in non-chordate animals. Provide examples of coelomate, pseudocoelomate, and acoelomate organisms, and discuss how the presence or absence of a coelom affects their body structure and functions.

11. Discuss the key characteristics, diversity, and ecological significance of the phylum Annelida. Provide examples of different annelid classes and their roles in various ecosystems.

12. Discuss the key characteristics, classification, and ecological roles of organisms in the phylum Porifera (sponges). How do sponges contribute to marine ecosystems, and what are some of the unique features that set them apart from other animal phyla?

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MODEL QUESTION PAPER

U.G. (Semester-I) Examination, 20___

(Session: 2023-27)

(Zoology)

(Paper: MIC-1)

(Diversity of Non-Chordata; THEORY)

(MGUG(I)-ZOOL-(MIC-1-T))

Time: 3 Hours   Maximum Marks: 70

Note: Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks. Answer from all the Groups as directed. Question no 1 is compulsory.

Group-A

(Objective Answer Type Questions)

1. Choose the correct answer from the options given below: 2 x 10 = 20

   i) What is the primary distinguishing feature of non-chordates?

       a) Presence of a backbone

       b) Presence of a notochord

       c) Jointed appendages

       d) Vertebral column

   ii) Which phylum includes animals with a soft, porous body and is often referred to as "sponges"?

       a) Porifera

       b) Arthropoda

       c) Mollusca

       d) Cnidaria

   iii) What is the primary respiratory organ in many insects?

       a) Lungs

       b) Gills

       c) Tracheae

       d) Skin

iv) Which phylum includes animals with radial symmetry and specialized stinging cells called cnidocytes?

      a) Annelida

      b) Platyhelminthes

      c) Cnidaria

      d) Echinodermata

v) What is the main distinguishing characteristic of arachnids, such as spiders and scorpions?

      a) Jointed appendages

      b) A hard, chitinous exoskeleton

      c) Three body segments

      d) Antennae

vi) The water vascular system is a characteristic feature of animals belonging to the phylum:

      a) Echinodermata

      b) Arthropoda

      c) Mollusca

      d) Porifera

vi) Animals in the phylum Mollusca are known for having:

      a) Mantle and shell

      b) Jointed appendages

      c) Segmented bodies

      d) Chitinous exoskeleton

vii) What is the primary body cavity found in non-chordates called?

      a) Coelom

      b) Notochord

      c) Endoderm

      d) Ectoderm

viii) Which of the following is an invertebrate animal?

      a) Dog

      b) Butterfly

c) Frog

d) Fish

ix) Which phylum includes animals like jellyfish and corals?

a) Arthropoda

b) Cnidaria

c) Mollusca

d) Annelida

x) Which of the following is a characteristic of the phylum Echinodermata?

a) Segmented body

b) Soft body with a coelom

c) Water vascular system

d) External skeleton made of chitin

Group-B

(Short Answer Type Questions)

Note: Write short notes on **any four** of the following: 5x4=20

2. Briefly describe the body structure of animals in the phylum Mollusca.

3. What is the primary function of the water vascular system in echinoderms?

4. What is a coelom, and why is it significant in the classification of non-chordates?

5. What is the primary characteristic that distinguishes animals in the phylum Arthropoda?

6. What is the distinguishing feature of the phylum Annelida in terms of body structure?

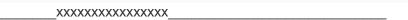7. What is the primary respiratory organ in many crustaceans, such as crabs and lobsters?

Group-C

(Long Answer Type Questions)

Note: Answer **any three** of the following:　　　　10x3=30

8. Discuss the diversity, ecological importance, and unique characteristics of invertebrate animals within the phylum Arthropoda. Provide examples of different arthropod classes and their roles in various ecosystems, highlighting the reasons behind the success of arthropods as a dominant animal group on Earth.

9. Explain structure and life cycle of *Paramecium*.

10. Provide general characteristics and classification (up to order) of the phylum porifera.

11. Describe structure and life cycle of *Fasciola*.

12. Explain anatomical details of *Pila* with suitable diagrams.

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MODEL QUESTION PAPER

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(Session: 2023-27)

(Zoology)

(Paper: MDC-1)

(Diversity of Non-Chordata; THEORY)

(MGUG(I)-ZOOL-(MDC-1-T))

Time: 3 Hours   Maximum Marks: 70

Note: Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks. Answer from all the Groups as directed. Question no 1 is compulsory.

Group-A

(Objective Answer Type Questions)

1. Choose the correct answer from the options given below: 2 x 10 = 20

    i) What is the primary characteristic that distinguishes animals in the phylum Arthropoda?

    a) Presence of a notochord

    b) Absence of a backbone

    c) Jointed appendages and exoskeleton

    d) Radial symmetry

    ii) Which of the following phyla is characterized by animals with a hydrostatic skeleton?

    a) Annelida

    b) Arthropoda

    c) Mollusca

    d) Platyhelminthes

    iii) In which phylum would you find animals with specialized stinging cells called cnidocytes?

    a) Cnidaria

    b) Porifera

    c) Echinodermata

    d) Annelida

iv) Animals in the phylum Arthropoda are known for:

a) Jointed appendages and an exoskeleton

b) Radial symmetry and soft bodies

c) Segmentation and a coelom

d) A notochord for support

v) Annelids are characterized by:

a) Segmented bodies and a coelom

b) Jointed appendages and an exoskeleton

c) A notochord and a dorsal nerve cord

d) Radial symmetry and a water vascular system

vi) Which phylum includes animals with a muscular foot, mantle, and radula?

a) Mollusca

b) Porifera

c) Platyhelminthes

d) Nematoda

vii) The water vascular system is a unique feature of animals in the phylum:

a) Echinodermata

b) Annelida

c) Arthropoda

d) Mollusca

viii) What is the main distinguishing feature of the phylum Mollusca?

a) Presence of segmented bodies

b) Radial symmetry

c) Mantle and shell

d) Nematocysts for defence

ix) Which non-chordate phylum is associated with filter-feeding and often forms reef-like structures in aquatic environments?

a) Annelida

b) Cnidaria

c) Porifera

d) Mollusca

x) Animals in the phylum Platyhelminthes are commonly referred to as:

a) Roundworms

b) Flatworms

c) Segmented worms

d) Crustaceans

Group-B

(Short Answer Type Questions)

Note: Write short notes on **any four** of the following: 5x4=20

2. How do animals in the phylum Mollusca typically obtain their food?

3. What is the unique feature of the water vascular system in echinoderms?

4. What is the primary function of the exoskeleton in arthropods?

5. What is the primary characteristic of the phylum Arthropoda?

6. Explain the key features of the phylum Cnidaria and provide examples of cnidarians.

7. Briefly discuss the characteristics and unique water vascular system found in echinoderms.

Group-C

(Long Answer Type Questions)

Note: Answer **any three** of the following: 10x3=30

8. Explain structure and life cycle of *Sycon*.

9. Provide general characteristics and classification (up to order) of the phylum annelida.

10. Describe structure and life cycle of *Ascaris*.

11. Explain anatomical details of *Pharetima* with suitable diagrams.

12. Describe various types of canal system found in different poriferans.

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